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Progress on Paulo Afonso Project Noted

Studebaker to Build in Brazil

Plans for Local Truck Factory Announced by Vice-President

The Studebaker Corporation, of South Bend, Indiana, intends to install a truck factory in Brazil in the near future, it was disclosed by Mr. R. A. Hutchinson, Vice-President of the corporation, during a recent trip to Brazil.

The gradual development of this project, he added, would render it possible not only to build trucks but eventually, automobiles and tractors also.

The Studebaker official indicated that complete production of vehicles in Brazil is the industry's ultimate goal, and that Brazilian raw materials and supplies would be extensively used from the start.

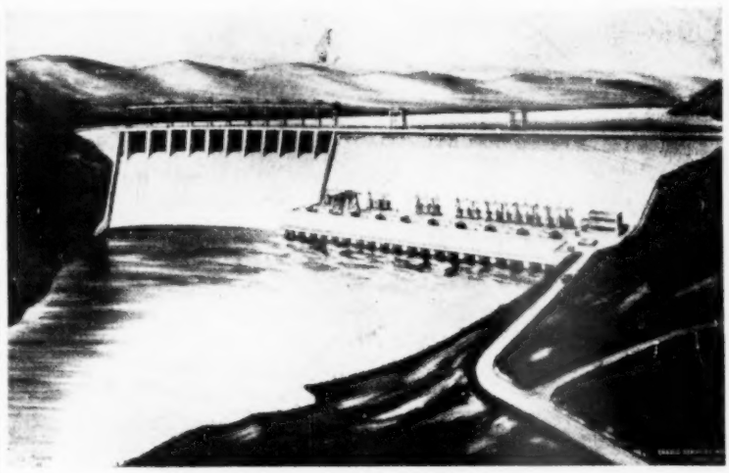
He explained that the decision to build in Brazil had been taken as a result of the development of the Brazilian parts, tire, coachwork and battery industries.

The first stage of development, it was indicated, would be the production of parts, then that of truck cabins, which will eventually be made with dies produced in Brazil. Other phases planned include complete construction of the motor.

The Studebaker vice-president estimated that the factory might be able to supply as much as 20 per cent of Brazil's total requirements of trucks, by producing up to 10,000 units a year.

Looking forward to the future, Mr. Hutchinson even suggested that Brazil may shortly be in a position to export vehicles, in view of large-scale plans for local production.

Peixoto Project Will Boost Industry



The Peixoto hydro-electric development, located on the Rio Grande river, on the São Paulo, Minas Gerais state line, is scheduled to produce, ultimately, a total of 400,000 kilowatts. It may be the forerunner of other developments to harness the Rio Grande for a total of 1.1 million kilowatts, according to a recently-announced survey. (For further news, see page 7)

Brazil's Heavy Industry Has Output Boosts Up to 21% in First Qtr. of '54

Official Statistics Display Big Gains in Cement, Steel and Iron

Production of cement, steel and iron in Brazil increased during the first quarter of 1954 at rates varying from 7 up to more than 21 per cent, by comparison with the corresponding figures for the first quarter of 1953, according to figures released by the Mineral Production Department of Brazil's Ministry of Agriculture during July.

Biggest gain was in the field of cement production, where a boost of 21.4 per cent was registered, with a production of 573,474 tons for the January-March period of 1954, by comparison with 472,514 tons for the same period last year.

Pig-Iron Up Sharply

Pig-iron output rose 11.6 per cent, to 220,867 tons this year from 197,931 tons last year and 198,611 tons of rolled steel sheets were produced for the period this year, for a 7.8 per cent rise over last year's figure of 184,292 tons.

Steel ingot output was given as 251,231 tons, or 7.6 per cent greater than the 233,475 tons pro-

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Reservoir to Fill in August

Carlos Berenhauser Junior Reports Closure of Dam Diversion Project

The rock barrage for the São Francisco river diversion structures of Brazil's giant Paulo Afonso project was completed on July 20, General Carlos Berenhauser Junior, director of Companhia Hidroeletrica do São Francisco recently disclosed.

This, it was explained, would now permit rapid completion of the main arm of the dam, about ten thousand feet in length.

As a result of this development, carried out by a group of Brazilian engineers, headed by Dr. Otavio Marcondes Ferraz, the reservoir which will feed the hydro-electric power station should be filled within the month of August.

High-tension power lines running across country from the Paulo Afonso station have already reached Recife, capital of the State of Pernambuco and Salvador, capital of Bahia.

Details of Project

Paulo Afonso, a project designed for ultimate output of some 900,000 kilowatts, will produce 120,000 kilowatts in its first stage, later be stepped up by successive stages of development.

It is expected to provide new impulse to the entire surrounding region, within a radius of some 300 miles, containing about 15 per cent of Brazil's population.

Inexpensive power is scheduled to provide vast investment opportunities in such diversified fields as fisheries, agriculture, mining, the textile industry and chemicals.

Brazil Heavy Industry Had Sharp Gains in 1st Quarter

Cement Paces Rise in Basic Output

Ingot Steel, Pig Iron and Rolled Steel Sheets Boosted

(*From Page 1*)

duced in the first three months of 1953.

The cement production figure indicates the country is now producing at an annual rate of about 2.3 million tons a year, and this expansion heralds even greater goals ahead.

Many Plants Coming

A recent study showed that fourteen new cement factories should be in operation within about the next two years, when output should rise to some 4.5 million tons.

The drive for more steel is, of course, spearheaded by Volta Redonda, which has just completed a first stage of expansion, is producing at a rate of 730,000 tons of ingot steel a year now, and plans to execute a second stage of expansion to reach the one million mark.

However, other steel developments are not lagging.

Other Developments

At present in an advanced stage of planning is a 300,000 ton a year steel mill to be built at Piassaguera, near Santos, while the Jaffet group is to build a 120,000 ton a year plant at Lafayette in Minas Gerais, the Acesita plant is expanding its facilities for producing alloy steels, the Belgo-Mineira plant in Minas Gerais is expanding its facilities, and a new steel plant is being put up at Vitória by joint Brazilian and German capital, and may eventually have a capacity as high as 400,000 tons a year.

Hydro- and Thermo-Electric Projects Pushed In Many Sectors of Brazil

Power Developments Create Firm Basis for Growing Industrial Investment

(*From Page 7*)

plants, and one thermo-electric station.

The service area of the Paulista Company has shown remarkable economic vitality. Modern agricultural methods are the rule throughout this area and a high degree of farm mechanization has been achieved in recent years.

In addition to Companhia Paulista de Fôrça e Luz, the Emprezas Eletricas Brasileiras group is comprised of 11 other companies, serving some of Brazil's largest and most important cities.

Principal Cities Served

These cities include Recife, with some 550,000 inhabitants, Salvador with nearly 500,000, Pôrto Alegre with over 400,000 and Belo Horizonte with an estimated 350,000 and rank as third, fourth, fifth and sixth respectively in the list of Brazil's largest cities.

Niterói and Curitiba, each with approximately 200,000, rank as eleventh and twelfth.

According to census figures, many of these cities are among the fastest-growing in Latin America, and several of them rank with the world's most rapidly developing cities.

Between the 1940 and the 1950 census, Belo Horizonte, as an example, increased its population by 70 percent and Pôrto Alegre by 47 percent.

Five Year, $100 Million Plan

A Five-Year Plan launched by the power group, and approved by President Getulio Vargas on June 5, 1952, involves expenditures estimated at more than $100 million.

The dollar purchases of heavy equipment required under the plan were made possible mainly through financial assistance from the Export-Import Bank of Washington which extended credits of $41,140,000 in January 1952.

Earlier credits from the Export Import Bank to Brazilian Associates of American & Foreign Power Company, Inc. bring the total financial assistance to $50 million.

Local Stock Issues

The large expenditures in Brazilian cruzeiros are being financed in part through the local sale of common stock, mostly to investors living in the service area.

This offer of common stock to the public was a pioneering initiative in the Brazilian capital market, and has resulted in the sale of over $20 million worth of securities of several of the Associated Companies.

The Associated Company in the state of Rio de Janeiro, Cia. Brasileira de Energia Eletrica, will build a thermo-electric station in Niterói, the progressive state capital lying across Guanabara bay from the nation's capital, the city of Rio de Janeiro.

Two 11,500 kw generating units are planned for this station.

Paraná Developments

At the Chaminé Hydro-Electric Station, of the Cia. Fôrça e Luz do Paraná, a fourth generating unit was put in service in 1953, bringing the station's total installed capacity up to 16,000 kw.

At present, Curitiba's available power supply, which includes six recently installed 1,000 kw diesel units, is adequate to meet the needs of the city and neighboring communities.

Foreseeing however, that demand would continue to grow rapidly, a start has been made on a new generating plant, the Guaricana Hydro-Electric Station.

Guaricana was laid out having in mind the possibility of an ultimate installed capacity of 40,000 kw, while the initial installed capacity will be 15,000 kw.

Diesel Assistance

Diesel generating units have been installed to reinforce the power supply by the Associated Companies at Vitória, Maceió, and Natal, capitals respectively of the states of Espírito Santo, Alagôas and Rio Grande do Norte; and also at Pelotas, second largest city in the southernmost of Rio Grande do Sul.

Along with new power plant construction, all the Brazilian Associates of American & Foreign Power Company, Inc., have been engaged in recent years in a program of substantial development of their transmission and distribution facilities.

The Paulista Company, owing to the geographical spread of the territory it serves, has undertaken the construction of new transmission lines over considerable distances, while at the same time expanding its distribution network.

The other operating companies, whose power plants are as a rule much closer to the communities served, have concentrated on the improvement of their distribution facilities.

Interconnection with P. Afonso

Pernambuco Tramways and Power Company, Limited, and the Companhia Energia Elétrica da Bahia, are at present enlarging and renovating their distribution network, in advance of the connection of their systems with the Federal Government's Paulo Afonso hydro-electric development, the first generating units of which are scheduled to be put in service late in 1954.

Transmission lines from the Paulo Afonso Station, 251 miles southwest of Recife (Pernambuco) and 282 miles northwest of Salvador (Bahia), have been brought to the outskirts of these two important cities, where those Companies supply electric power and light services.

NOTE

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First Brazil Tractor Manufacture Project is Pushed

Taubaté Chosen as Factory Site

600-Acre Industrial Lot is Being Made Ready for Plant

Ground is now ready to be broken on an industrial lot about 600 acres in extent for the first tractor factory in Brazil, the Brazilian press recently disclosed.

The new plant, to be located in Taubaté, and owned and operated by Intramag, S.A., Indústria de Tratores, Máquinas Agrícolas e de Obras Públicas, a joint French-Brazilian concern, will commence manufacturing within less than a year, and is planning to achieve 83 per cent local manufacture of the tractors before five years have elapsed, in accordance with the gradual industrialization program of Brazil.

Initial Capital

Initial capital of Intramag, which was organized in April this year, is Cr$5 millions, but, it is disclosed, it will be increased to Cr$100 millions, after the concern's industrial and financial plan is approved by the Industrial Development Commission and by the Superintendency of Currency & Credit.

Furthermore, it is added, negotiations are already practically concluded in France for the granting of financing to the extent of about 2.5 billion francs, for the purchase of equipment and manufacturing materials.

Traditional Mark

The tractors have long been imported into Brazil, under the trademark "Continental", from their French manufacturers, Establissements Richard Frères.

The parent company was induced to enter the field of local manufacture as a result of the increasing demand for their products in the Brazilian market.

Stepwise Industrialization

The manufacturing plan will commence with complete assembly and partial manufacture, and will then proceed in accordance with a five-stage progressive schedule.

During the first year, in addition to complete assembly, about 20 per cent of the actual parts used in the tractor will be made in Brazil.

In the second year, 40 per cent of the parts entering the tractor will be Brazilian-made; the third year should see 60 per cent being made locally, the fourth, 80 per cent, and in the fifth year, at least 83 per cent of the Continental tractor will be manufactured entirely in Brazilian plants.

Goal: 2,000 Units Yearly

By the time the manufacturing cycle is completed, Intramag expects to be producing at least two thousand tractors a year in Brazil.

The corporation was organized as a result of technical, economic and financial studies carried out by the Economic Department of Brazil's Finabras (Sociedade Financeira do Brasil), one of a number of investment-banking organizations which are assuming an increasingly important part in the development of Brazil's economy.

Local Training Program

French specialists are being brought to Brazil for the requisite training of Brazilian personnel in the manufacturing skills required in producing the tractor.

A series of factors led to the choice of Taubaté as the location of the factory.

Strategic Location

In the first place, Taubaté is soon to be the site of the largest foundry in South America, to be built by the São Paulo industry, Máquinas Piratininga, S.A., so that heavy cast parts will be readily available.

Secondly, the factory is close to Volta Redonda, largest steel mill in Brazil, and thus has access to plentiful supplies of high-grade steel.

Taubaté Is Industrial Magnet

(Taubaté, chief city of the Paraíba Valley, between Rio and São Paulo, is rapidly becoming a magnet for Brazilian and foreign heavy industry. In addition to the Piratininga foundries, it was recently announced that the German Volkswagen plant will soon be established in that area, and the giant Brazilian industrial concern, VEMAG, which represents the Swedish Scania Vabis products and the Massey-Harris line.)

Taubaté is also to be the scene

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Modernism in Brazilian Architecture

View of Vale do Anhangabaú in the heart of São Paulo. The world's fastest-growing large city. In the foreground is the largest re-enforced concrete building in the world, displaying Brazil's trend to modern, functional architecture.

Future for Meat Exports is Viewed

May be Vast Exchange Source for Brazil, Experts Predict

Brazil could become the world's largest exporter of meats, and obtain from this source a revenue in foreign exchange equaling that produced by coffee exports, according to the final report submitted by the Klein and Saks Mission, who were contracted by the Brazilian Government to study and make recommendations about the country's food supply and processing problems.

Healthy Situation Reported

The Mission's report also stated that, with the exception of certain quantities of wheat, Brazil produces all the food she needs for domestic consumption.

(Boosting of wheat output, and measures to make wheat growing an increasingly economic activity in Brazil, are top priority developments in the country. Brazil has recently disclosed that she intends to achieve a wheat crop in 1954 of one million tons and about $8 million is being invested to improve mechanization and in developing other features.)

Recommendations Made

Among the principal recommendations made by the Mission to improve the nation's food-supply system were: *Transportation* — the development of existing railway facilities to permit the shipment of cereal crops from Goiás and Paraná; *Warehousing* — the immediate construction, with domestic labor and materials, of a chain of warehouse and cold-storage facilities; *Food Processing* — the creation of an industry in the Amazon to process the pirarucú, a fish which could substitute for codfish imports; *Agricultural Credit and Price Controls* — the concession of low-interest credit to farmers and limitation of attempts to artificially control

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AGENDA FOR INTER-AMERICAN CONFERENCE APPROVED

The agenda for the Inter-American Economic Conference, to be held in Rio next November, has been approved by the Inter-American Economic and Social Council.

The principal items will be: international trade; economic developments; transport and financial cooperation.

AUTOMOBILE COMMISSION

A further step towards complete industrialization of automobiles in Brazil is the recent setting up of the Executive Commission on Automobile Industry Materials. This Commission will be in charge of reviewing customhouse tariffs, classifying automotive merchandise for importation, creating markets, verifying production costs and organization of expositions and catalogs.

Appointments, Directives

The Commission, created by Decree No. 35, 729, issued in June, is under the direction of the Ministry of Finance and will have eight members, to be appointed by the President of the Republic. It will also assist in establishing and developing manufacturing plants.

NEW RAILWAY CARS TO BE PURCHASED

Mr. Hugo de Oilveira, Director of Railways, announced his intention of purchasing 300 new cars for the Central do Brasil railroad to meet existing needs for better freight service in the area between São Paulo, Rio and Minas Gerais.

It is expected that this improved service will be in effect before the end of the year.

U. S. FIRM TO CONSTRUCT AMAZON REFINERY

According to the Brazilian press, the "Southern Engineering Company" of Los Angeles has obtained a $4 million contract to construct a complete petroleum refinery in Manaus for the Amazon Petroleum Company.

The refinery will have the capacity to refine 5 thousand barrels of crude petroleum daily.

Brazilian News and Notes

RIO WILL IMPORT TRAILER-BUSES

The Municipality of Rio has obtained permission from the Finance Ministry to import 200 bus chassis from Germany at the official rate of exchange.

The chassis, costing $12,000 each, will be mounted in São Paulo, and arrangements have been made to pay the German manufacturers over a period of 48 months.

In addition, the Municipality is seeking permission to import trailer-buses, a new type of transport vehicle already in use in Holland, Germany and Japan.

The trailer-buses, which have a capacity of 120 passengers (45 seated and 75 standing), would cost Cr$865,000 each, and are highly recommended for their low-operating costs since each bus consumes only 120 liters of diesel oil in 18 hours and requires fewer tire replacements.

"LIGHT" PROFITS IN FIRST FIVE MONTHS OF 1954

The cruzeiro profits of the Brazilian Traction, Light and Power Co. during the first five months of 1954 were more than 14 per cent higher than in the same period last year, it is disclosed.

According to a statement issued by that company in Toronto, net operating profits in the first five months of the current year were Cr$629,895,000, against Cr$550,384,000 in the corresponding period of 1953.

ASSIS RIBEIRO ELECTED GENERAL ELECTRIC PRESIDENT

Dr. José de Assis Ribeiro has been elected president of General Electric S.A., succeeding Mr. Ralph H. Greenwood, who held that position for 17 years.

Mr. Greenwood, a past president of this chamber, was recently awarded the order of the Cruzeiro do Sul for his valuable collaboration with Brazil for the country's progress.

NEW STEEL MILL IN MINAS GERAIS

The new steel mill to be constructed in Lafayette, Minas Gerais, will have a starting capacity of 120,000 tons of steel a year. This figure is given by Mr. Ricardo Jaffet, who also estimates the cost at $50 million. Part of this amount will be financed in the United States and part in Europe.

It has previously been announced that the new factory will employ 5000 workers.

The project is under the direction of the mining concern, "Mineração Geral do Brasil", who will import the material for installing the plant from France, Germany and the United States.

According to Mr. Jaffet the new Lafayette plant should be operating within the next three years.

Land Reclamation Project Pushed

The land area between the Santos Dumont airport and Viuva Hill in Rio grows as the sea is pushed back with dirt excavated from nearby Santo Antonio Hill.

Some 250 acres will be reclaimed from the sea when this project is completed in about 18 months, and will cost a million and a half cruzeiros.

New Streets and Avenues

The construction of new streets and avenues where waves once rolled in will bring much-needed traffic relief to this section. Busy activity in this area has made it necessary for most of the hauling of the dirt and rock to be done at night when traffic is lighter.

Gardens and Clubs

In addition to streets and avenues gardens will spring up, a statue will be erected to FEB (Brazilian Expeditionary Force); and the Modern Museum of Art and boat clubs will be constructed along the man-made beach.

Also a new breakwater will extend about four miles along the waterfront.

Future for Meat Exports is Viewed

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prices; *Meat and Cattle*—the development of a large export trade in beef and other meats.

The Government has acted on at least one of the recommendations recently by allotting Cr$40 million to the Ministry of Agriculture to finance construction of slaughter houses and meat-processing plants in the cattle-producing regions of Rio Grande do Sul, Santa Catarina, Mato Grosso, Goiás, Minas Gerais, Paraná and Bahia.

Tractors to be Made at Taubaté

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of the new Johnson & Johnson factory and of the Dutch Phillips electrical and radio industry.

Intramag is administrated by a Board composed of three Brazilian directors, Mr. Hélio Mota, Mr. Luis Carneiro da Cunha, with a third appointee still to be named, and three French Directors, Mr. Jean-Maurice Layolle, who is corporation president, Mr. André Luc Ernoult, and Mr. André Nouailhetas.

ENGINEERS TO BRAZIL

Approximately 80 engineers in United States industry and government will participate in three major engineering conventions in Brazil, according to the Engineers Joint Council.

The conventions are the World Power Conference at Rio de Janeiro; the Inter-American Association of Sanitary Engineering, and the Pan American Federation of Engineering Societies, at São Paulo.

BIG CLOCK PRODUCTION

The "Tagus" clock factory of São Paulo, manufacturer of all kinds of clocks, is one of the largest in Latin America.

More than 100 workmen are employed at "Tagus", with a monthly production of about 600 units.

1953-54 Sugar Crop Sets Record, Nearly 2 Million Tons

Output Up 8% On Last Year's Mark

Study Shows Brazilian Production Rose 143 Percent in 15 Yrs.

Sugar production in Brazil for the 1953-54 crop increased by about 8 per cent over the previous year's output, thus establishing a record for the second successive year, reports from Brazil state.

Preliminary figures of the Sugar & Alcohol Institute indicate that sugar production from the 1953-54 crop, which ended May 31, amounted to 1,999,728 tons, representing an increase of 8 per cent over the previous record crop.

The state of São Paulo was the leader producing 701,625 tons, or 35 per cent of the overall total.

16 Per Cent Boost Last Year

Figures on the 1952-53 season had indicated an increase of about 16 per cent for last year's crop.

Production of *usina* sugar increased no less than 143 per cent between the 1937-38 season and the 1952-53 season, it has been estimated, and the rate of increase has quickened progressively year by year.

Steady Progress Noted

Dividing the last fifteen years into three equal periods the percentage increase has risen from 25 during the first five years to 41 in the second and 75 in the third.

On the other hand, production of low grade sugars, which contributed 19.7 percent to the total in 1947-48, has since declined steadily.

Consumption Rise Foretold

A substantial increase in consumption has been predicted during the next few years by the specialized magazine *Sugar*, owing to the rapid growth of the population, increasing purchasing power and continued expansion in the manufacture of foodstuffs, beverages, chemicals and pharmaceutical products.

The foodstuffs industry, includ- the confectionery, jam-making and preserved fruits branches, has made great strides since the war, and now ranks third in the list of Brazil's industrial activities.

High Profits are Rule

Average profits, in the industry rose from 24.3 percent in 1950 to 27.9 percent in 1951 to 27.9 percent in 1952, while in 106 firms, whose balance sheets were examined by Rio's *Conjuntura Econômica*, capital plus reserves increased by 17 percent, to a figure equivalent to over $195 million.

Cane-growing tends to increase in São Paulo, and the municipality of Mogí-Mirim is likely to become an important sugar zone.

Modernization Afoot

Old mills are being modernized and new ones installed, including one at São João da Bôa Vista.

Also, Cajurú and Araraquara, the latter of which has 41,340 acres under cane, are extending their plantations.

Actual increase in production of high-grade sugar, in São Paulo, between 1945 and 1951, reached a figure of 225 percent, it is estimated.

In Pernambuco, Brazil's second most important sugar state, areas planted in sugar cane increased by 28.8 percent between 1945 and 1951, from 333,322 to 429,267 acres, and output of *usina* sugar rose from 319,294 to 529,158 short tons (a boost of 65.7 percent).

An interesting development in the sugar industry is the recently-reported launching of a plan to produce cellulose from bagasse.

A corporation is to be established in the Northeast with initial financing provided by the Institute of Sugar & Alcohol. The Institute is to be repaid for its outlay by a levy of Cr$2 per bag of sugar, payable by the mills, over a period of five years.

Sugar on Show

The dynamic development which has characterized sugar cultivation in Brazil in recent years is graphically depicted in the agricultural exhibits featured by the São Paulo Fourth Centennial exhibitions, now being held in São Paulo.

In a special pavilion visitors have an opportunity to view both the traditional past of Brazil as a sugar-growing country, and the technical developments which are helping to improve production in modern times, right down to such developments as the bagasse paper-manufacture and even the manufacture of heavy industrial equipment for sugar mills, in São Paulo's industrial park.

Graceful Living in Beautiful Rio

New Yorkers, sweltering in near 100 degree heat, may well envy the gentleman taking his ease in the middle of the Copacabana Palace Hotel's attractive swimming pool. If envy should give place to action, they may also remember they are but 18 hours away from Rio by modern means of transport.

Wood Production Boost is Sought

Brazil Plans to Triple Output in Amazon, with F.A.O. Assistance

Brazil will soon inaugurate a program aimed at tripling the lumber output of the Amazon River basin within ten years, it was recently announced.

The program will be carried out in conjunction with the United Nations Food and Agricultural Organization.

Big Brazilian Financing

The Brazilian administration earmarks three per cent of its income for Amazon developments, while the F.A.O. is to supply $40,000 worth of equipment as well as technical services.

An F.A.O. mission, which recently visited the Amazon valley in this connection, admitted that this target was really much below the "staggering proportions" of the forest's real capacity.

The State of Amazon is 85 per cent wooded, and has reserves estimated to last for at least 500 years.

Favorable Aspects

Favorable aspects of the Amazon for forestry operations, the mission stated, are "the magnificent system of waterways, the general ease of topography and the open nature of the jungle, which allows easy removal of logs."

Modern methods of extraction and industrialization could reduce the cost of Amazon lumber, and open a much greater market for it, the experts maintained.

Thousands of Hardwoods

Brazil's tropical and sub-tropical forests have several thousand

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Brazilian FreightCar Factory Will Produce Trucks Also

Loan of Cr$49 Million for Fábrica Nacional de Vagões is Authorized

Quantity Truck Production is the Goal of Brazilian Economic Planners

Brazil's successful Fábrica Nacional de Vagões, S.A., which has already built up a large-scale rolling stock industry, may now organize to build truck chassis and roadbuilding equipment, according to advices disclosed in the Brazilian press.

President Getúlio Vargas was reported to have approved a report submitted by the Finance Ministry, authorizing the National Economic Development Bank to concede a Cr$49 million loan to the industry to expand its installations and permit it to produce truck chassis and roadbuilding equipment.

Rolling Stock Development

The plant at present produces rolling stock for Brazil's railroads, to which it has delivered thousands of freight cars in the past few years.

(Manufacture of rolling stock, one of the country's preferred industrial activities, is receiving increasing attention from Brazilian economic planners and today the industry is reported to have a capacity of more than 6,000 freight cars per year).

Ties in with General Plans

Announcement of the authorization of the cruzeiros loan to the Fábrica Nacional de Vagões comes just a few weeks after the issuance of a progressive plan for the development of complete Brazilian manufacture of light trucks, presented to the President of the Republic by the Tractor, Jeep, Truck and Automobile Sub-Committee of Brazil's Commission on Economic Development.

The importance of development of the industry in Brazil has been stressed in the light of the fact that Brazil will require at least 75 thousand light trucks a year for the next few years, for proper economic development.

The prospects for importing such quantities are called somewhat remote, in the light of the exchange implications of such purchases.

What Imports Cost

The Sub-Committee has presented figures showing that for the three-year period 1950-52, automotive imports accounted for about 15 percent of Brazil's total imports, and estimates for the future have indicated that average expenditure for the next ten years on trucks alone might well run as high as $180 millions a year, and might reach an all-over total of as much as $250 millions annually.

Progressive Plan Given

The plan for manufacture of light trucks in Brazil has been based, initially, on "total utilization at the outset of the capacity for manufacture of parts already available."

The Sub-Committee selected the simpler items, already being produced in Brazil or which Brazilian industry is in a position to produce, and reached the conclusion, it is added, that almost seventy percent of the total was either obtainable or potentially obtainable in Brazil.

Percentual Breakdown

Of this total 9.5 percent represents tyres and inner tubes, 8.5 percent the springs, 1 percent the battery, 8.1 percent brake drums and wheel hubs, 3.2 percent the bumpers and sundry similar parts, 4.4 percent the fenders, cowling and similar items, 9.8 percent the four wheels, 10.8 percent the chassis and frame, and 0.7 percent minor parts such as brake and clutch pedals.

To achieve this porportion of total manufacture, all that is necessary according to the Sub-Committee is an adequate "market reserve."

To nationalize to a greater extent would involve manufacture of complete motors backaxles, etc.

Estimate of Cost

Calculations made by Commander Lúcio Meira, President of the Sub-Committee on Jeeps, Tractors, Trucks and Automobiles, of the Industrial Development Commission, had shown that Brazilian industry could produce a light truck (1,300 to 3,200 kilos) at a cost of between Cr$100,000 and Cr$120,000, which would allow of its sale on the Brazilian market under favorable conditions.

Gen. Tire Brazil Plant Inaugurated

Factory in State of Rio Will Make 173,000 a Year at Outset

General Tire & Rubber's new Brazilian factory was inaugurated in July, reports from Brazil disclose.

The plant, located in the State of Rio de Janeiro, is said to be one of the most modern in the world, was built in extra-rapid time, according to the reports.

It will commence operating with an output of 100,000 automobile tires a year, 73,000 truck tires and 120,000 inner tubes, it is disclosed.

Booming Industry

This is the second large-scale rubber industry development in recent months.

Previous event was the inauguration of the Dunlop Rubber Company's Brazilian plant at Campinas in the State of São Paulo.

Brazil's total output of tires was estimated last year in the neighborhood of two million units a year.

All types are produced from the smallest bicycle and specialty tires up to huge units for earth-moving equipment, airplanes and heavy trucks.

The rubber industry has been called the fastest-growing line of activity in modern Brazil. Estimates have placed its rate of growth, over a ten-year period, higher than 1,000 per cent.

Wood Production Boost is Sought

New Measures Aimed at Development of Vast Amazon Resources

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varieties of hardwoods. If exploited, they could supply the requirements of the whole world.

The country's wide selection of hardwoods can fulfill almost any conceivable hardwood requirement.

When industry needs a wood resistant to insects, it could use Brazilian cedar, either the soft variety or a hard and durable type, or canela sassafras which gives off a pungent pest-repelling odor could be used.

Protection against marine life on the other hand, could be had by using anauera (anaueria brasiliensis, Kosterm.), widely used for piles, dock planking, and boat hulls.

Flexible Woods

Woods for barrels and boats must have flexibility and elasticity. Brazil's *amarelinho*, a wood very similar to American hickory, or the blackish purple *guajuvira*, has these qualities.

Life rafts and certain parts for small light airplanes call for a strong but light wood. Here Brazil's barriguda, (Chorisia insignis, H.B.K.), whose specific gravity is 0.44, could be used.

Freijó (Coria Goeldiana, Hub.) which has a specific gravity between 0.40 and 0.70 could be used for propellers.

Some woods must be resistant to dampness, dry-rot, etc., Brazil's *cabreuva* (myocarpus fastigiatus fr.), *copaiba* (coapifera Langsdorffi, Desfontaines) or *Gonçalo Alves* (astronium fraxinifolium, Sch.) all fulfill these requirements.

Pulley blocks and tackle demand a very dense, wear-resistant wood. Few types are better than the *pau ferro* (Casalpinia, Mart.) which is so hard and resistant it cannot be worked with ordinary tools.

Rio Grande River May Yield 1.1 Million Kilowatts

Peixoto Project Seen Forerunner

400,000-Kilowatt Plant May Lead to One of World's Outstanding Systems

The 400,000 kilowatt Peixoto hydro-electric development, now under construction by Cia. Paulista de Fôrça e Luz (American & Foreign Power Co. affiliate) on the Rio Grande river, near the state line between São Paulo and Minas Gerais, may be the forerunner of further developments on the same river, totaling as much as 1,100,000 kilowatts, an extensive preliminary survey carried out in Brazil indicates.

Progressive Expansion

Three later developments on the same 230-mile-long stretch of river on which Peixotos is situated would be located at the points known as Praia, Marimbondo and Estreito, and could, according to the report, "be undertaken progressively as the demand for power makes them necessary and adequate financing is assured."

Among World's Largest

"When completed", it is added, "the entire Rio Grande hydro-electric development will rank among the most important in the world."

The Peixoto dam will be 1,600 feet long, with a maximum height of 235 feet, and will form a reservoir 70 miles long and 98 square miles in area

Huge Penstocks Used

The power house at the foot of the dam is to be an outdoor-type structure about 630 feet long and 75 feet wide. Ten seamless steel penstocks, each over 19 feet in diameter and 170 feet long, are to be installed at the initial stage of the construction. Each of the two 40,000 kilowatt generating units of the initial installation comprises a 56,000 HP turbine and a 40,000 kilowatt generator.

The shafts of the generators, 23 feet long and weighing 58 tons each, are the heaviest single piece of equipment to be transported to the job.

$36 Million Cost

Peixoto's initial installation of 80,000 kilowatts will be put into service at an estimated cost of over $36,000,000.

Other noteworthy power-plant construction jobs being carried out by the Companhia Paulista de Fôrça e Luz include the construction of a 30,000 kw thermo-electric station at Carioba, near the city of Americana.

This is the first steam plant in the Paulista system, and the first of its two generating units has just been placed in service.

The Carioba site, on the banks of the Piracicaba river and alongside the trunk line of Cia. Paulista de Estradas de Ferro, was chosen with special regard to facilities for fuel transport, water supply and integration into the existing interconnected system.

The power plant comprises two 200,000 pound an hour steam boilers and two 18,750 kw turbo-generators.

Power, generated at 13,800 kw is stepped up at the plant sub-station for a present transmission of 66,000 kw.

Tie-in Connections

The Carioba Station is tied in with the existing inter-connected system of Cia. Paulista de Força e Luz, through 66,000 volt transmission lines to neighboring localities, and later will also be connected through two separate 132,000 volt lines to new sub-stations at the important cities of Campinas and Araraquara.

A third 10,000 kw generating unit recently installed at the Americana Hydro-Electric Station, near the city of Americana, brings up this plant's total capacity to 30,000 kw.

This station, one of the most modern of its kind, was first put in service in 1949 with an initial installation of two 10,000 kw generating units.

A third 5,000 kw generating unit recently installed at the Americana Hydro-Electric Station, near the city of Americana, brings up this plant's total capacity to 30,000 kw.

This station, one of the most modern of its kind, was first put in service in 1949 with an initial installation of two 10,000 kw generating units.

A third 5,000 kw generating unit has been installed at the Jaguarí Hydro Electric Station near the city of Campinas, bringing up the total capacity of that plant to 12,648 kw.

The Companhia Paulista de Fôrça e Luz's 17-Station Network operates an extensive interconnected system of 17 hydro-electric

(*See Page* 2)

Belo Horizonte, Upland City, Links Progress, Beauty

Belo Horizonte, the breezy mountain capital of the State of Minas Gerais, presents a smiling face to the world. With a bracing, coolish climate the city is a fine place to work, and is located in the midst of one of Brazil's fastest-growing industrial regions. The article on this page gives some details of a power project that is destined to boost even further Minas Gerais' growing manufacturing potential.

OPPORTUNITIES IN BRAZILIAN TRADE

The Brazilian Government Trade Bureau has received the following inquiries from businessmen in Brazil, who desire to export or import the products listed below. These inquiries are published as received and no representation is made as to standings of listed firms. We suggest that the parties interested write directly to these firms, via airmail, as well as to this office, at 551 Fifth Avenue, New York 17, N. Y.

BUYERS WANTED

COARSE GRADE TAPIOCA FLOUR, export type. Ernesto Mueller, Caixa Postal 277,- Florianópolis, Santa Catarina, Brazil.

CASTORSEED, COTTON, CARNAUBA WAX, SKINS and HIDES, "ARCEL" Corretagem, Imobiliária, Comércio e Representações, S.A., Avenida Rio Branco 52, sala 803, Rio de Janeiro, Brazil.

SISAL, TAPIOCA FLOUR, Laboremus Limitada, Rua Debret 23, grupo 608/610, Rio de Janeiro, D.F., Brazil.

TAPIOCA FLOUR, GLOBOLA-Imp., Exp. e Representações Ltda., Caixa Postal 7352, São Paulo, Brazil.

CARNAUBA WAX, SKINS and HIDES, RESINS, BRAZIL NUTS, and JABORANDI LEAVES. Durval Gonçalves, Caixa Postal 109, Teresina, Piauí, Brazil.

BRAZILIAN ORCHIDS and other ornamental flowers. Carlos Leite de Castro, Rua Emílio Ribas 55, Santos, Estado de São Paulo, Brazil.

EMETINE HYDROCHLORIDE USP XIV. Extracted from Mato Grosso Ipecac Root. Large quantities available. Laboratórios Silva Araujo-Roussel, S.A., 262 Avenida Beira-Mar, Rio de Janeiro, Brazil.

SEMI-PRECIOUS STONES, such as **TURMALINES, AQUAMARINES, TOPAZ; ORNAMENTAL FEATHERS; HANDICRAFTS** and **CURIOS** from the **INDIGENOUS POPULATION; TROPICAL FISH** for **AQUARIUMS;** (including **ELECTRICEELS**); **SONG-BIRDS, PLUMAGE BIRDS,** and **OTHER COLLECTORS' LIVESTOCK.** Álvaro de Souza, Rua Rodrigo Silva 18, Sala 802, Rio de Janeiro, Brazil.

SECTIONAL BAMBOO FISHING RODS. Fábrica de Varas para Pesca "JAÚ", Caixa Postal 57, Jaú, Estado de São Paulo, Brazil.

TAPIOCA FLOUR, SOYA BEANS, RICE. Cereais Rosito Ltda., Caixa Postal 2476, Pôrto Alegre, Rio Grande do Sul, Brazil.

"TRADE OPPORTUNITIES"
for American firms

The Brazilian Government Trade Bureau also accepts advertisements from U.S. firms wishing to reach interested parties in Brazil in its weekly "BOLETIM AMERICANO", in Portuguese, widely distributed in Brazil. U.S. firms wishing to import Brazilian products and desiring to use these facilities are invited to write to: Brazilian Government Trade Bureau, 551 Fifth Avenue, New York, New York.

FLAGS, SPORTS GOODS, MEDALLIONS, SHIELDS, POSTCARDS, MAGAZINES, ETC., especially wall flags, featuring famous Brazilian sights, such as Sugar Loaf, Maracanã Stadium, Corcovado, Copacabana, Rio Carnaval, Quitandinha, Terezópolis, Iguassú Falls, Rio Grande Gauchos, Ceará Sea-Going Rafts (Jangadas), Rio-Brasil Mercantil Ltda., Caixa Postal 4716, Rio de Janeiro, Brazil.

BRAZILIAN PRODUCE in general. A. Pheeney C. Silva, Caixa Postal 12866, São Paulo, Brazil.

SISAL FIBERS. Medeiros & Irmão Caixa Postal 107, João Pessôa, Paraíba, Brazil.

FRESH BANANAS. Alvaro de Mendonça Borba, Rua Sete de Abril 252, 3.°, sala 34, São Paulo, Brazil.

MANIÇOBA CRÊPE RUBBER, TEA, HERVA MATE, MICA, CRYSTALLIZED MENTHOL. José Kaselkovitz, Rua Guaicurús 1303, São Paulo, Brazil.

DRIED BANANAS. Representações SINGOR Ltda., Caixa Postal 1343, Pôrto Alegre, Rio Grande do Sul, Brazil.

RICE, BABASSÚ KERNELS, CORN, CASHEW NUTS, TAPIOCA FLOUR, RICE MEAL, COTTONSEED OIL, BABASSÚ OIL, COTTON WASTE. Ruy Abreu & Cia., Caixa Postal 79, São Luiz, Maranhão, Brazil.

MICA, about 500 tons, in blocks. Natércio Maia, Rua Saldanha da Gama 58, Bairro do Roger, João Pessôa, Paraíba, Brazil.

TAPIOCA WHITE FLOUR, MANGROVE BARK. Salma Chear Hiluy, Caixa Postal 227, São Luiz, Maranhão, Brazil.

TAPIOCA FLOUR. Furtado & Dourado Ltda., Caixa Postal 124, Rio Grande, Rio Grande do Sul, Brazil.

CASTOR SEED, VEGETABLE OILS, ESSENTIAL OILS, BABASSÚ KERNELS, BRAZIL NUTS, FIBERS. Brasmatéria, Rua Visconde de Inhaúma 134, salas 927-28, Rio de Janeiro, Brazil.

TIJUCA BLACK GRANITE. Kropsch & Cia., Ltda., Caixa Postal 1972, Rio de Janeiro, Brazil.

TAPIOCA FLOUR and other CEREAL products. Custódio Apolonio da Rosa, Caixa Postal 44, Laguna, Santa Catarina, Brazil.

PRECIOUS STONES. Adolf A. Milch, Avenida Rio Branco 151, S. 1109, Rio de Janeiro.

SELLERS WANTED

COTTON AND OTHER SHIRTINGS, BRINS AND ALSO PLASTIC MATERIALS. Pedreiro-Exportaçã e Importação, Ltda., Caixa Postal 356, Uberlandra, Minas Gerais, Brazil.

WIRE (smooth, barbed, copper, etc.), **GALVANIZED TUBES, IRON and STEEL SHEETS and SECTIONS, TOOLS, CHEMICAL PRODUCTS for textile mills and tanneries, PARAFFIN, AUTO PARTS and ACCESSORIES.** GRACOR, Representações e Comércio Limitada, Rua do Rosario 84, Fortaleza, Ceará, Brazil.

SHOE MACHINERY AND SEWING MACHINES, especially interested in reconditioned LANDIS and SINGER machines. J. Czin, Rua Florêncio de Abreu, 157, (Sala 706), São Paulo, Brazil.

MACHINERY and EQUIPMENT for CIVIL CONSTRUCTION, HAND-TOOLS, PRE-FABRICATED STRUCTURAL MATERIALS (Celotex, asbestos, etc.). Névio Barboza e Silva, Rua Izabel Velho 692, Nossa Senhora do O, São Paulo, Brazil.

NEW HAMPSHIRE chicks, INCUBATORS and other **POULTRY BREEDING APPLIANCES.** Filomeno Fernandes, Caixa Postal 4749, Rio de Janeiro, Brazil.

PRINTING INKS. ELO, Rua Araújo Pôrto Alegre 70, sala 612, Rio de Janeiro, Brazil.

FERROS and **NON-FERROUS METALS, TUBES, WIRE, WIRE ROPES HEAVY MACHINERY, POWER PLANTS, CHEMICALS** in general. Imhauka Brasileira Industrial e Comercial, S.A., Caixa Postal 43, Rio de Janeiro, Brazil.

MACHINES for making concrete blocks and other cement artefacts. Emprêsa "UNIVERSO", Caixa Postal 80, Santarém, Pará, Brazil.

FORD AUTOMOBILES, eight-cylinder, four-door, 1948 model. Iremar Villarim Meira, Caixa Postal 80, Campina Grande, Paraíba, Brazil.

REPRESENTATIVES

Sales representative in U.S. required for Brazilian producer of mica. Edwin Collier, Jr., Caixa Postal 308, Governador Valadares, Estado de Minas Gerais, Brazil.

Manufacturers and/or exclusive exporters of printing inks are offered exclusive representation by ELO, Rua Araújo Pôrto Alegre 70, sala 612, Rio de Janeiro, Brazil.

Brokers wanted in U.S. for sale of carnauba wax. Carnaúba Comercial Ltda., Caixa Postal 813, Fortaleza, Ceará, Brazil.

MISCELLANEOUS

WANTED American partner with 10.000 dollars to start in a very promising horticultural (including hydroponics), poultry and coffee enterprise. Big returns within a few months. Further details: Honorato Menon, Caixa Postal 8790—S. Paulo—Brasil.

Consulting, managing and financing services for business investments in Brazil. Littlejohn & Cia., Ltda., Caixa Postal 7352, São Paulo, Brazil.